

RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/619,939 A
Source: IFW/6
Date Processed by STIC: 11/29/06

ENTERED



IFW16

RAW SEQUENCE LISTING

DATE: 11/29/2006

PATENT APPLICATION: US/10/619,939A

TIME: 13:49:13

Input Set : R:\Revised Sequence Listing 11-21-06.ST25.txt

Output Set: N:\CRF4\11292006\J619939A.raw

```

3 <110> APPLICANT: Advisys, Inc.
5 <120> TITLE OF INVENTION: Codon optimized Synthetic Plasmid
7 <130> FILE REFERENCE: 108328.00146
C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/619,939A
C--> 9 <141> CURRENT FILING DATE: 2003-07-15
9 <160> NUMBER OF SEQ ID NOS: 43
11 <170> SOFTWARE: PatentIn version 3.3
13 <210> SEQ ID NO: 1
14 <211> LENGTH: 3534
15 <212> TYPE: DNA
16 <213> ORGANISM: artificial sequence
18 <220> FEATURE:
19 <223> OTHER INFORMATION: Plasmid vector having an analog GHRH sequence.
21 <400> SEQUENCE: 1
22 gttgtaaaac gacggccagt gaattgtaat acgactcact atagggcgaa ttggagctcc      60
24 accgcggtgg cggccgtccg ccctcggcac catcctcacg acacccaaat atggcgacgg      120
26 gtgaggaatg gtggggagtt atttttagag cggtgaggaa ggtgggcagg cagcaggtgt      180
28 tggcgctcta aaaataactc ccgggagtta ttttttagagc ggaggaatgg tggacacca      240
30 aatatggcga cggttcctca ccggtcgcca tatttgggtg tccgccctcg gccggggccg      300
32 cattcctggg ggccggggcg tgctcccgcc cgctcgata aaaggctccg gggccggcgg      360
34 cggcccacga gctaccgga ggagcgggag gcgccaagct ctagaactag tggatcccaa      420
36 ggcccactc cccgaaccac tcagggtcct gtggacagct cacctagctg ccatggtgct      480
38 ctgggtgttc ttctttgtga tcctcacct cagcaacagc tcccactgct cccacactcc      540
40 ccctttgacc ctgaggatgc ggcggcacgt agatgccatc ttcaccaaca gctaccggaa      600
42 ggtgctggcc cagctgtccg cccgcaagct gctccaggac atcctgaaca ggcagcaggg      660
44 agagaggaac caagagcaag gagcataatg actgcaggaa ttcgatatca agcttatcgg      720
46 ggtggcatcc ctgtgacccc tccccagtgc ctctcctggc cctggaagtt gccactccag      780
48 tgcccaccag ccttgtccta ataaaattaa gttgcatcat tttgtctgac taggtgtcct      840
50 tctataatat tatggggtgg aggggggtgg tatggagcaa ggggcaagtt gggaagacaa      900
52 cctgtagggc ctgcggggtc tattgggaac caagctggag tgcagtggca caatcttggc      960
54 tctactgcaat ctccgcctcc tgggttcaag cgattctcct gcctcagcct cccgagttgt      1020
56 tgggattcca ggcattgatg accaggctca gctaattttt gtttttttgg tagagacggg      1080
58 gtttcaccaa attggccagg ctggtctcca actcctaate tcaggtgatc taccacctt      1140
60 ggcctcccaa attgctggga ttacaggcgt gaaccactgc tcccttcctt gtccttctga      1200
62 ttttaaaata actataccag caggaggacg tccagacaca gcataggcta cctggccatg      1260
64 cccaaccggt gggacatttg agttgcttgc ttggcactgt cctctcatgc gttgggtcca      1320
66 ctgagtagat gcctgttgaa ttcgataccg tcgacctcga gggggggccc ggtaccagct      1380
68 tttgttcctt ttagtgaggg ttaatttcga gcttggcgta atcatggtca tagctgtttc      1440
70 ctgtgtgaaa ttgttatccg ctcacaaatc cacacaacat acgagccgga agcataaagt      1500
72 gtaaagcctg ggggtgcctaa tgagttagct aactcacatt aattgcgttg cgctcactgc      1560
74 ccgctttcca gtcgggaaac ctgtcgtgcc agctgcatta atgaatcggc caacgcgcgg      1620
76 ggagaggcgg tttgcgtatt gggcgctctt ccgcttcctc gctcactgac tcgctgcgct      1680
78 cggtcgttcg gctgcggcga gcggtatcag ctactcaaa ggcggtaata cggttatcca      1740

```

RAW SEQUENCE LISTING

DATE: 11/29/2006

PATENT APPLICATION: US/10/619,939A

TIME: 13:49:13

Input Set : E:\Revised Sequence Listing 11-21-06.ST25.txt

Output Set: N:\CRF4\11292006\J619939A.raw

```

80  cagaatcagg ggataacgca ggaaagaaca tgtgagcaaa aggccagcaa aaggccagga 1800
82  accgtaaaaa ggccgcgttg ctggcgtttt tccataggct ccgccccctt gacgagcatc 1860
84  acaaaaaatcg acgctcaagt cagagggtggc gaaacccgac aggactataa agataccagg 1920
86  cgttttcccc tggaagctcc ctcgctgcgt ctccgtgttc gaccctgccg cttaccggat 1980
88  acctgtccgc ctttctccct tcgggaagcg tggcgctttc tcatagctca cgctgtaggt 2040
90  atctcagttc ggtgtaggtc gttcgctcca agctgggctg tgtgcacgaa cccccgttc 2100
92  aqcccqaccg ctgcgctta tccggttaact atcgtcttga gtccaacccg gtaagacacg 2160
94  acttatcgcc actggcagca gccactggta acaggattag cagagcgagg tatgtaggcg 2220
96  gtgctacaga gttcttgaag tggtagccta actacggcta cactagaaga acagtatttg 2280
98  gtatctgcgc tctgctgaag ccagttacct tcggaaaaag agttggtagc tcttgatccg 2340
100 gcaaaacaaac caccgctggt agcgggtggtt tttttgtttg caagcagcag attacgcgca 2400
102 gaaaaaaaagg atctcaagaa gatcctttga tcttttctac ggggtctgac gctcagaaga 2460
104 actcgtcaag aaggcgatag aaggcgatgc gctgcgaatc gggagcggcg ataccgtaaa 2520
106 gcacgaggaa gcggtcagcc cattcgccgc caagctcttc agcaatatca cgggtagcca 2580
108 acgctatgtc ctgatagcgg tccgccacac ccagccggcc acagtcgatg aatccagaaa 2640
110 agcggccatt ttccaccatg atattcgga agcaggcatc gccatgggtc acgacgagat 2700
112 cctcgccgtc gggcatgcgc gccttgagcc tggcgaacag ttccggtggc gcgagcccct 2760
114 gatgctcttc gtccagatca tctgatcga caagaccggc ttccatccga gtacgtgctc 2820
116 gctcgatgcg atgtttcgct tggtagtcga atgggcagggt agccggatca agcgtatgca 2880
118 gccgccgat tgcacagcc atgatggata ctttctcggc aggagcaagg tgagatgaca 2940
120 ggagatcctg ccccggcact tcgcccata gcagccagtc cttccccgtc tcagtgcaca 3000
122 cgtcgagcac agctgcgcaa ggaacgcccg tcgtggccag ccacgatagc cgcgtgcct 3060
124 cgtcctgcag ttcatcagg gcaccggaca ggtcggtctt gacaaaaaga accgggcgcc 3120
126 cctgcgtga cagccggaac acggcgcat cagagcagcc gattgtctgt tgtgccagt 3180
128 catagccgaa tagcctctcc acccaagcgg ccggagaacc tgcgtgcaat ccatcttgtt 3240
130 caatcatgcg aaacgatcct catcctgtct cttgatcaga tcttgatccc ctgcgccatc 3300
132 agatccttgg cggcaagaaa gccatccagt ttactttgca gggcttccca accttaccag 3360
134 agggcgcccc agctggcaat tccggttcgc ttgctgtcca taaaaccgcc cagtctagca 3420
136 actgttgggg agggcgatcg gtgcgggcct cttcgctatt acgccagctg gcgaaagggg 3480
138 gatgtgctgc aaggcgatta agttgggtaa cgccagggtt ttcccagtcg cgac 3534
141 <210> SEQ ID NO: 2
142 <211> LENGTH: 2739
143 <212> TYPE: DNA
144 <213> ORGANISM: artificial sequence
146 <220> FEATURE:
147 <223> OTHER INFORMATION: Optimized vector having an analog GHRH sequence.
149 <400> SEQUENCE: 2
150 ccaccgcggt ggcggccgtc cgccctcggc accatcctca cgacacccaa atatggcgac 60
152 gggtagaggaa tggtagggag ttatttttag agcgtgagg aaggtgggca ggcagcaggt 120
154 gttggcgctc taaaaataac tcccgggagt tatttttaga gcggaggaat ggtggacacc 180
156 caaatatggc gacggttctt caccgtcgc catatttggg tgtccgccct cggccggggc 240
158 cgcattcctg ggggcccggc ggtgctccc cccgctcga taaaaggctc cggggccggc 300
160 ggcggcccac gagctacccg gagagcggg aggcgccaa cggatcccaa ggcccaactc 360
162 cccgaaccac tcagggtcct gtggacagct caccatagct ccatggtgct ctgggtgttc 420
164 ttctttgtga tctcaccct cagcaacagc tcccactgct cccacacctc ccctttgacc 480
166 ctgaggatgc ggcggtatgc agatgccatc ttcaccaaca gctaccgga ggtgctgggc 540
168 cagctgtccg cccgcaagct gctccaggac atcatgagca ggcagcagg agagaggaa 600
170 caagagcaag gagcataatg actgcaggaa ttcgatatca agcttatcgg ggtggcatcc 660
172 ctgtgacccc tcccagtgct ctctcctggc cctggaagtt gccactccag tgcccaccag 720

```

RAW SEQUENCE LISTING

DATE: 11/29/2006

PATENT APPLICATION: US/10/619,939A

TIME: 13:49:13

Input Set : E:\Revised Sequence Listing 11-21-06.ST25.txt

Output Set: N:\CRF4\11292006\J619939A.raw

```

174 ccttgtccta ataaaattaa gttgcatcat tttgtctgac taggtgtcct tctataatat 780
176 tatgggggtg aggggggtgg tatggagcaa ggggcaagtt ggggaagacaa cctgtagggc 840
178 tcgagggggg gcccggtacc agcttttggt cccttttagtg aggggttaatt tcgagcttgg 900
180 tcttcgcgtt cctcgctcac tgactcgctg cgctcggtcg ttcggctgcg gcgagcggtg 960
182 tcagctcact caaaggcggt aatacggtta tccacagaat caggggataa cgcaggaaag 1020
184 aacatgtgag caaaaggcca gcaaaaggcc aggaaccgta aaaaggccgc gttgctggcg 1080
186 tttttccata ggctccgccc ccctgacgag catcacaaaa atcgacgctc aagtacagagg 1140
188 tggcgaaacc cgacaggact ataaagatac caggcgtttc cccctggaag ctccctcgtg 1200
190 cgctctcctg ttccgaccct gccgcttacc ggatacctgt ccgcctttct cccttcggga 1260
192 agcgtggcgc tttctcatag ctacgcgtgt aggtatctca gttcggtgta ggtcggtcgc 1320
194 tccaagctgg gctgtgtgca cgaacccccc gttcagcccg accgctgcgc cttatccggt 1380
196 aactatcgtc ttgagtcctaa cccggtaaga cagcacttat cgccactggc agcagccact 1440
198 ggtaacagga ttagcagagc gaggtatgta ggcggtgcta cagagttctt gaagtgggtg 1500
200 cctaactacg gctacactag aagaacagta tttggatatc gcgctctgct gaagccagtt 1560
202 accttcggaa aaagagttgg tagctcttga tccggcaaac aaaccaccgc tggtagcggt 1620
204 ggtttttttg tttgcaagca gcagattacg cgcagaaaaa aaggatctca agaagatcct 1680
206 ttgatctttt ctacggggtc tgacgctcag ctacgctcga gaagaactcg tcaagaaggc 1740
208 gatagaaggc gatgcgctgc gaatcgggag cggcgatacc gtaaagcacg aggaagcggt 1800
210 cagcccattc gccgccaagc tcttcagcaa tatgacgggt agccaacgct atgtcctgat 1860
212 agcggtcgcg cacacccagc cggccacagt cgatgaatcc agaaaagcgg ccattttcca 1920
214 ccatgatatt cggcaagcag gcatcgccat gagtcacgac gagatcctcg ccgtcgggca 1980
216 tgcgcgcctt gagcctggcg aacagttcgg ctggcgcgag cccctgatgc tcttcgtcca 2040
218 gatcatcctg atcgacaaga ccggcttcca tccgagtacg tgctcgctcg atgcgatggt 2100
220 tcgcttggtg gtcgaatggg caggtagccg gatcaagcgt atgcagccgc cgcattgcat 2160
222 cagccatgat ggatactttc tcggcaggag caaggtgaga tgacaggaga tctgccccg 2220
224 gcacttcgcc caatagcagc cagtccttc ccgcttcagt gacaacgctg agcacagctg 2280
226 cgcaaggaa ccccgctcgt gccagccacg atagccgcgc tgcctcgctc tgcagttcat 2340
228 tcaggggacc ggacaggtcg gtcttgacaa aaagaaccgg gcgcccctgc gctgacagcc 2400
230 ggaacacggc ggcacagag cagccgattg tctgttgtgc ccagtcatag ccgaatagcc 2460
232 tctccacca agcggccgga gaacctgcgt gcaatccatc ttgttcaatc atgcgaaacg 2520
234 atcctcatcc tgtctcttga tcagatcttg atccccctgc ccatcagatc cttggcggca 2580
236 agaaagccat ccagtttact ttgcagggtc tcccaacctt accagagggc gccccagctg 2640
238 gcaattccg ttcgcttgct gtccataaaa ccgcccagtc tagcaactgt tgggaaggcg 2700
240 gatcgtgtaa tacgactcac tatagggcga attggagct 2739

```

243 <210> SEQ ID NO: 3

244 <211> LENGTH: 795

245 <212> TYPE: DNA

246 <213> ORGANISM: artificial sequence

248 <220> FEATURE:

249 <223> OTHER INFORMATION: Nucleic acid sequence for the antibiotic resistance gene
 250 kanamycin.

252 <400> SEQUENCE: 3

```

253 atgattgaac aagatggatt gcacgcaggt tctccggccg cttgggtgga gaggtatttc 60
255 ggctatgact gggcacaaca gacaatcgcc tgctctgatg ccgccgtgtt ccggtgtca 120
257 gcgcaggggc gcccggttct ttttgtcaag accgacctgt ccggtgccct gaatgaactg 180
259 caggacgagg cagcgcggtc atcgtggctg gccacgacgg gcgttccttg cgcagctgtg 240
261 ctgcagcttg tctactgaagc ggggaaggac tggctgctat tgggcgaagt gccggggcag 300
263 gatctcctgt catctcacct tgctcctgcc gagaaagtat ccatcatggc tgatgcaatg 360
265 cggcggtgct atacgcttga tccggctacc tgcccattcg accaccaagc gaaacatcgc 420

```

RAW SEQUENCE LISTING

DATE: 11/29/2006

PATENT APPLICATION: US/10/619,939A

TIME: 13:49:13

Input Set : E:\Revised Sequence Listing 11-21-06.ST25.txt

Output Set: N:\CRF4\11292006\J619939A.raw

```

267 atcgagcgag cacgtactcg gatggaagcc ggtcttgctg atcaggatga tctggacgaa      480
269 gagcatcagg ggctcgcgcc agccgaactg ttcgccaggc tcaaggcgcg catgcccgcac      540
271 ggcgaggatc tcgtcgtgac tcatggcgat gcctgcttg cgaatatcat ggtggaaaat      600
273 ggccgctttt ctggattcat cgactgtggc cggctgggtg tggcggaccg ctatcaggac      660
275 atagcgttgg ctacccgtga tattgctgaa gagcttggcg gcgaatgggc tgaccgcttc      720
277 ctcgtgcttt acggtatcgc cgtccccgat tcgcagcgca tcgccttcta tcgccttctt      780
279 gacqagttct tctga                                                    795
282 <210> SEQ ID NO: 4
283 <211> LENGTH: 219
284 <212> TYPE: DNA
285 <213> ORGANISM: artificial sequence
287 <220> FEATURE:
288 <223> OTHER INFORMATION: Sequence for an analog porcine GHRH sequence.
290 <400> SEQUENCE: 4
291 atggtgctct ggggtgttctt ctttgtgac ctcaccctca gcaacagctc cactgctcc      60
293 ccacctcccc ctttgaccct caggatgcgg cggcacgtag atgccatctt caccaacagc      120
295 taccggaagg tgctggcca gctgtccgcc cgcaagctgc tccaggacat cctgaacagg      180
297 cagcaggagg agaggaacca agagcaagga gcataatga                        219
300 <210> SEQ ID NO: 5
301 <211> LENGTH: 246
302 <212> TYPE: DNA
303 <213> ORGANISM: artificial sequence
305 <220> FEATURE:
306 <223> OTHER INFORMATION: Sequence for an analog mouse GHRH sequence.
308 <400> SEQUENCE: 5
309 gccatggtgc tctgggtgct ctttgtgac ctcacctca ccagcggcag cactgcagc      60
311 ctgctcccca gccctccctt caggatgcag aggcacgtgg acgccatctt caccaccaac      120
313 tacaggaagc tgctgagcca gctgtacgcc aggaaggatga tccaggacat catgaacaag      180
315 cagggcgaga ggatccagga gcagagggcc aggctgagct gataagcttg cgatgagttc      240
317 ttctaa                                                                246
320 <210> SEQ ID NO: 6
321 <211> LENGTH: 234
322 <212> TYPE: DNA
323 <213> ORGANISM: artificial sequence
325 <220> FEATURE:
326 <223> OTHER INFORMATION: Sequence for an analog rat GHRH sequence.
328 <400> SEQUENCE: 6
329 gccatggccc tgtgggtgtt cttcgtgctg ctgaccctga ccagcgggaag cactgcagc      60
331 ctgctcccca gccctccctt cagggtgcgc cggcacgccg acgccatctt caccagcagc      120
333 tacaggagga tcctgggcca gctgtacgct aggaagctcc tgcacgagat catgaacagg      180
335 cagcaggcgc agaggaacca ggagcagagg agcaggttca actgataagc ttgc          234
338 <210> SEQ ID NO: 7
339 <211> LENGTH: 225
340 <212> TYPE: DNA
341 <213> ORGANISM: artificial sequence
343 <220> FEATURE:
344 <223> OTHER INFORMATION: Sequence for an analog bovine GHRH sequence.
346 <400> SEQUENCE: 7
347 gccatggtgc tgtgggtgtt cttcctggtg accctgaccc tgagcagcgg ctcccacggc      60

```

RAW SEQUENCE LISTING

DATE: 11/29/2006

PATENT APPLICATION: US/10/619,939A

TIME: 13:49:13

Input Set : E:\Revised Sequence Listing 11-21-06.ST25.txt

Output Set: N:\CRF4\11292006\J619939A.raw

```

349 tccctgccct cccagcctct gcgcattccct cgctacgccg acgccatctt caccaacagc      120
351 taccgcaagg tgctcggcca gctcagcgcc cgcaagctcc tgcaggacat catgaaccgg      180
353 cagcagggcg agcgcaacca ggagcaggga gcctgataag cttgc                      225
356 <210> SEQ ID NO: 8
357 <211> LENGTH: 225
358 <212> TYPE: DNA
359 <213> ORGANISM: artificial sequence
361 <220> FEATURE:
362 <223> OTHER INFORMATION: Sequence for an analog ovine GHRH sequence.
364 <400> SEQUENCE: 8
365 gccatggtgc tgtgggtggt cttcctggtg accctgaccc tgagcagcgg aagccacggc      60
367 agcctgcccc gccagccctt gaggatccct aggtacgccg acgccatctt caccaacagc      120
369 tacaggaaga tcctgggcca gctgagcgct aggaagctcc tgcaggacat catgaacagg      180
371 cagcagggcg agaggaacca ggagcagggc gcctgataag cttgc                      225
374 <210> SEQ ID NO: 9
375 <211> LENGTH: 246
376 <212> TYPE: DNA
377 <213> ORGANISM: artificial sequence
379 <220> FEATURE:
380 <223> OTHER INFORMATION: Sequence for an analog chicken GHRH sequence.
382 <400> SEQUENCE: 9
383 gccatggtgc tctgggtgct ctttgtgatc ctcattctca ccagcggcag ccaactgcagc      60
385 ctgcctcccc gccctccctt caggatgcag aggcacgtgg acgccatctt caccaccaac      120
387 tacaggaagc tgctgagcca gctgtacgcc aggaaggtga tccaggacat catgaacaag      180
389 cagggcgaga ggatccagga gcagagggcc aggctgagct gataagcttg cgatgagttc      240
391 ttctaa                      246
394 <210> SEQ ID NO: 10
395 <211> LENGTH: 190
396 <212> TYPE: DNA
397 <213> ORGANISM: artificial sequence
399 <220> FEATURE:
400 <223> OTHER INFORMATION: Nucleic acid sequence of human growth hormone poly A tail.
402 <400> SEQUENCE: 10
403 ggggtggcatc cctgtgaccc ctccccagtg cctctcctgg ccttgggaagt tgccactcca      60
405 gtgcccacca gccttgcctt aataaaatta agttgcatca ttttgtctga ctaggtgtcc      120
407 ttctataata ttatgggggtg gaggggggtg gtatggagca aggggcaagt tgggaagaca      180
409 acctgtaggg                      190
412 <210> SEQ ID NO: 11
413 <211> LENGTH: 55
414 <212> TYPE: DNA
415 <213> ORGANISM: artificial sequence
417 <220> FEATURE:
418 <223> OTHER INFORMATION: Nucleic acid sequence of human growth hormone 5'
untranslated
419      region
421 <400> SEQUENCE: 11
422 caaggcccaa ctccccgaac cactcagggt cctgtggaca gctcacctag ctgcc          55
425 <210> SEQ ID NO: 12
426 <211> LENGTH: 782
427 <212> TYPE: DNA

```

VERIFICATION SUMMARY

DATE: 11/29/2006

PATENT APPLICATION: US/10/619,939A

TIME: 13:49:14

Input Set : E:\Revised Sequence Listing 11-21-06.ST25.txt

Output Set: N:\CRF4\11292006\J619939A.raw

L:9 M:270 C: Current Application Number differs, Replaced Current Application No
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date